

PHENIX WEEKLY PLANNING



1/8/2009
Don Lynch

IR Configuration for remainder of shutdown

TECHNICAL SUPPORT 2009

| October | November | December | January |
|------------|--------------|------------|------------|
| 5 12 19 26 | 2 9 16 23 30 | 7 14 21 28 | 4 11 18 25 |

Run Position 10/20 - 10/31
(CM & MMS moved north WC west)

<DONE>

Station 1 south access 11/3-12/12
(MMS moved south WC west)

<DONE>

Station 1 north access 12/15-12/31
(CM moved south, WC west)

<DONE>

East Carriage Install 1/2-1/15
(CM moved north, EC & WC opt.)

<Current>

Run Position 1/16-1/19
(MMS moved north, EC & WC opt)

↔

Ready for run 9 1/19-2/1
(MuID Collars Installed, EC & WC opt.)

↔

All Lampshades now re-installed, no access to MMS, access to MMN via hatch only - confined space training required.



Station 1 scaffolding to be re-installed in south next shutdown

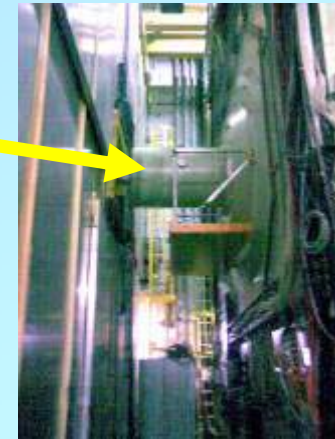
Prep for run 9

January 2009

TECHNICAL SUPPORT 2009

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

- Move CM to run position ready for EC roll in <DONE>
- Connect and leak test bridge manifold
- New subsystem commissioning
 - C-A carpenters fold EC platforms
 - Move MuID collars to IR
 - Magnet Tests
 - Remove Plates, cart & move Manlift
 - Disconnect EC shutdown connections
 - Roll in-to IR and North to run pos.
 - PHENIX techs reconnect water, elect., gas, fibers
 - C-A Carpenters restore scaffolding,
 - Re-install lift & ladder, re-connect gas sniffers
 - Mike Rau re-install lift wiring, Re-connect TOF blower
- DC East & West repairs (permits needed)
- Blue Sheet/Pink sheets/White Sheets
- Pre-run Commissioning
- Assemble shield wall
- Start watch shifts
 - Shield wall roll in
- Start of Run 9 (Cooldown)



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Other On going Tasks

Fan Tray Maintenance (fill in)

RPC3 Prototype install (11/15-1/31)
(Remaining tasks: run HV, signal and gas lines.)

RPC Factory Support (continuing)

Dark Current test stand

Storage Racks with humid. Cntrl

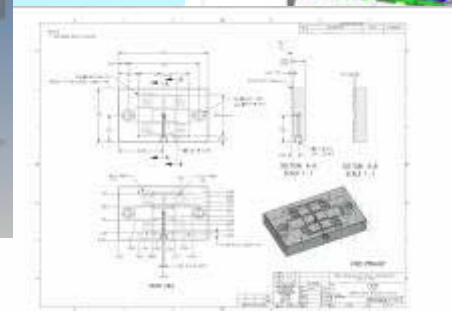
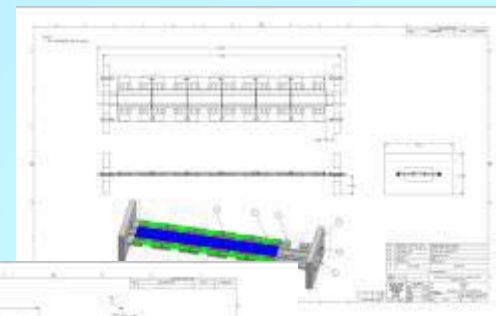
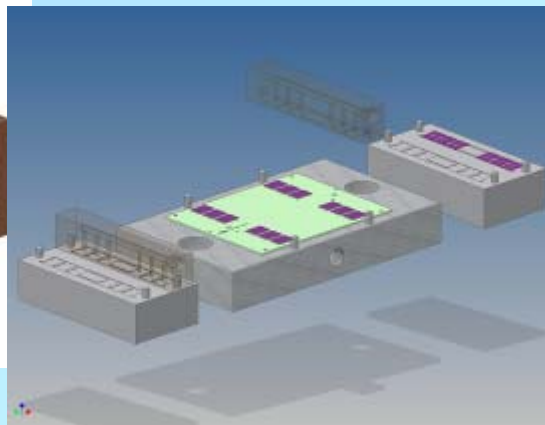
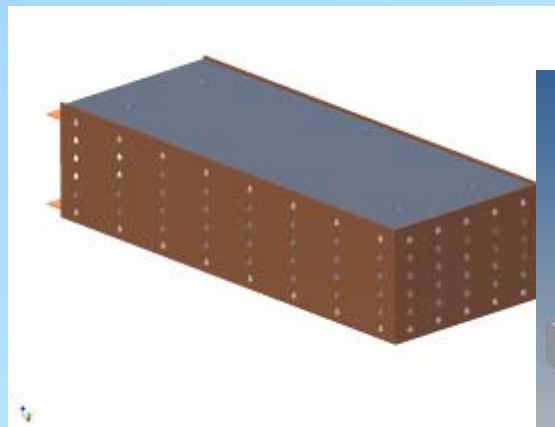
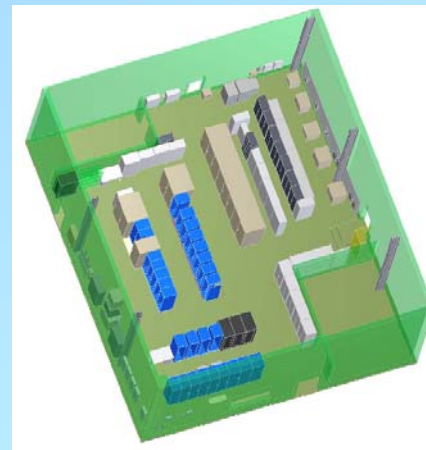
Burn-in test stand

Tilt & Elevating transport table

Prep for 2009 Shutdown
(as time permits)



Rack room electronics, etc.
NCC prototype design support
VTX fabrication tooling design
VTX installation design
FVTX design/engineering support



Electrical/Electronic Tasks

Here is a list of the important items required to be completed E&FI:

- **Control Room Annunciator System** - complete wiring and program the electronics for the additional 48 alarm window box unit. Frank & Paul **COMPLETE**
- **PHENIX Notifier Fire Alarm System** - Tie in two wire communication network cable into the five (5) new racks (IR Muon Trigger racks North & South, 2 Rack Room Muon Trigger racks, Tunnel rack for RPC. Program the fire alarm panel to recognize these new racks). Frank & Paul-**IN PROGRESS - Expected completion after East Carriage is in place.**
- Install and power the **Gas Mixing House SF6 detector/monitor** - Wire into the PHENIX Safety Monitor and control System (SMCS). Test and verify safety/alarm actions for the unit using R134A gas. **COMPLETE**
- Energize the **HBD heater and temperature monitor system** - Re-test & verify heater control and pre-amp temperature readout points for HBD East and West. Frank, Paul & Mike Lenz-one day. **Pre-amp temp point readout is functioning. Heaters not energized. Need authorization from HBD Group to test heaters.**
- Connect the **Remote Monitor & Control (RMC - ADAM System) communication cable** into the five new racks. Pre-test control and readout functions for these racks prior to "PINK" sheet testing. Frank & Steve Boose- **IN PROGRESS Expected completion after East Carriage is in place.**
- Perform a full "dry" run of all **SMCS logic actions** prior to performance of the CAD witnessed "BLUE" sheet test. Frank & Paul-two days. **Start pre-test next week. Need East Carriage installed.**

Lower priority

- Troubleshoot and repair **Muon Trigger optical data cables.** **Not complete.**
- Install and test temperature and flow interlock instruments for protection of the new **Control Room Duct Heater.** **Temperature interlock not required until summer. Vendor flow interlock is functional. Heater is now in service. Temporary heater should remain as backup for next few weeks.**

RPC:

- RPC LV, HV cabling. -> completed?
- Signal cabling. The 1500' order (5 300' spools) is delayed until Jan 28th so emergency ordered several 100' spools to complete RPC3. If we can't wait for RPC2 we'll have to order more 100' spools. All connectors ordered.
- Install SRPC1 trunk fibers in patch bay and install patchbay and fibers on CH end. Location to be established.
- Purchase and install ethernet-fiber converters in SRPC1 and CH.
- Add ADAM TC modules to read out thermocouples.
- Large grommets in crystal palace for all cables?

HBD Hall Sensors:

- Produce Hall sensor host boards.
- Calibrate the probes in Instrumentation.
- Produce two custom fanout cables.
- Install amplifier box and ADAM modules on bridge for readout.

Tunnel Scintillators/Scalers:

(John has been working on this. We will get some things together and hand it over to Anselm.)

- Modify G-link breakout CPLD logic for clocks.
- Install two NIM bins in SRPC1.
- Locate necessary blue logic.
- Install the TCP ADAM in SRPC1

- Run Power to new MuTrgr FEE racks on MMS. *by 10/31 Wiring completed...temporary power to be provided for South FEE tests* **Done**
 - Re-wire ToF Rack power distribution bucket in Gas Mixing House. This is to correct minor wiring errors. **Done. Mixing house UPS's installed and working.**
 - Walk down PHENIX Electrical Distribution Panels/Breakers and update changes on the electrical one-line drawings. **Complete by 12/31.**
 - Install power and signal cable tray (ceiling suspended) for new DCM rack row - north of existing DCM racks. **To Be Scheduled**
 - Assist in signal and LV cable installation for MuTr/RPC upgrades as necessary. **In Progress**
 - Repair Duct heaters for Control Room. *Temporary 15 KW Heater installed. To be completed?* **Done**
- The following items are Lower priority; not required for run 9, to be scheduled when manpower available and operations & projects inconvenience are minimized*
- Upgrade power capacity of Central Magnet power distribution for future bridge rack loads.
 - Remove existing 15KVA transformer and install 45KVA unit.

1008 Building Maintenance Issues

- Roof leak in utility bathroom at northwest corner behind tech offices.
- Roof leak over door between rack room and assembly hall.
- Trailer bathroom slop sink (for Custodians).
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- New duct heater (This item is in progress and should be completed soon)
- Improved Rack Room AC performance (This item has been addressed time and again but unsatisfactorily. Currently the AC fails periodically and is repaired only to fail again. On-condition maintenance is not adequate...an engineered solution is needed.)



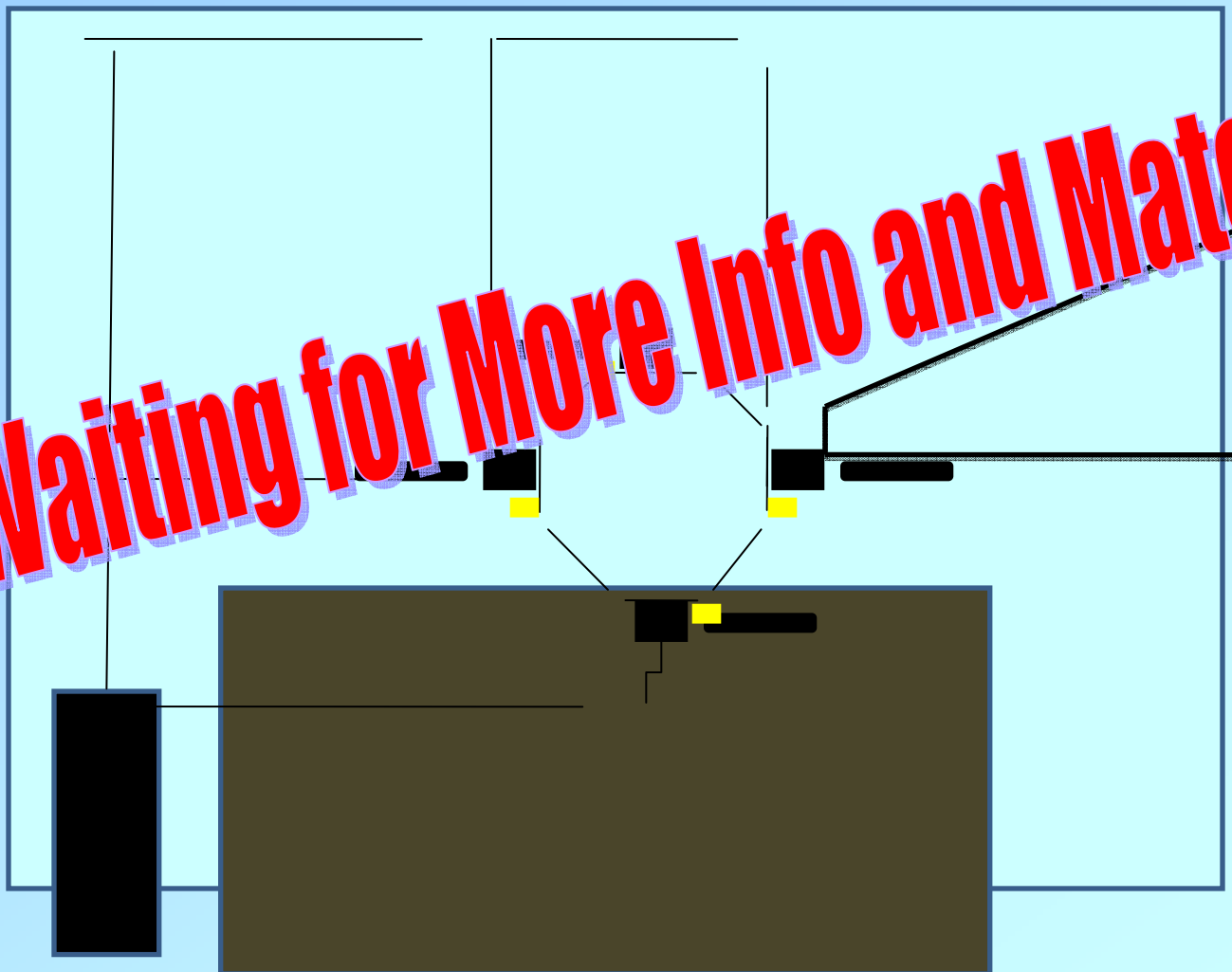
RPC3 Prototype Installation



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RPC3 Prototype scintillators

Waiting for More Info and Materials



RPC3 Prototype Installation: Scintillators

- 4 pairs of scintillation counters
- each pair consists of 2 ~1" thick scintillators; active area ~ 2" x 2" ; Length ~10" with phototube and shielding; light guide cylinder ~ 1" dia. With 1" dia PMT's; Weight is ~ 4 lb per pair.
- TLD's: Change and read weekly (quantity and location TBD)
- To be positioned in South tunnel uniformly distributed around the beam pipe at approximately 3, 6, 9 and 12 O'clock at a radially convenient location which overlaps the RPC3 prototype
- Z location is south of RPC3 as close as possible but at most 12" away (for the 3 O'clock pair, others to match z-position)
- Detectors require 2.5 kV to be run from IR.
- 16 channel signal, also to be run from IR
- Rack support is TBD

Repairs to be performed during '09 Shutdown

TECHNICAL



1/8/2009



Commissioning Underway

RPC Factory Change in Scope

Waiting for Minutes & Action Items:

Factory work permit revised draft submitted for review.

Revision to Gas Ops - Rob

Revision to HV & LV Ops - Paul

Revision to safety system checkout - Paul

Revision to assembly and test plan - Don

Revision to $\frac{1}{2}$ octant, module & gap storage plan - Don

RPC Factory Support



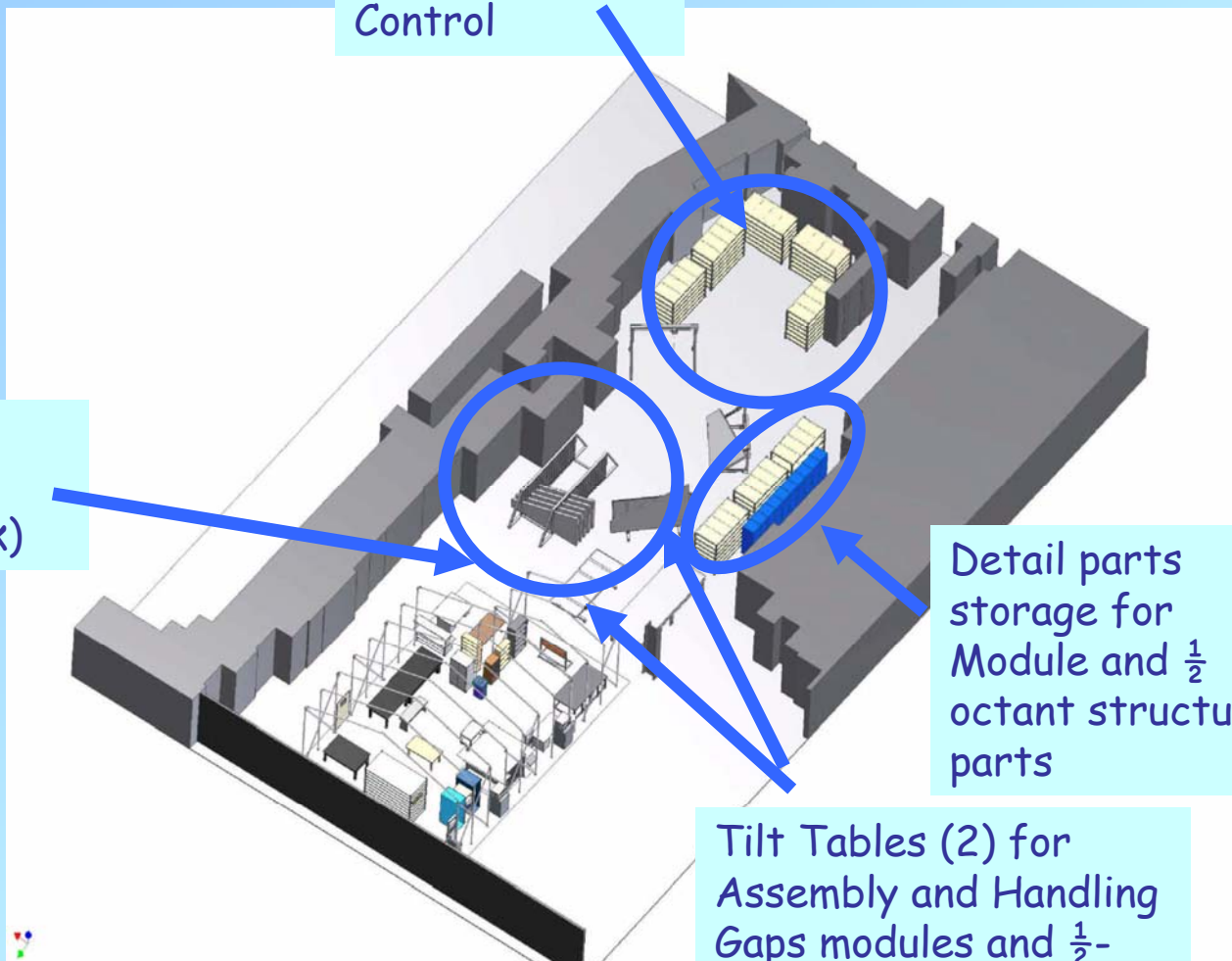
RPC Factory

Burn-in
test stand
(bicycle rack)

Module and Gap
Storage with
humidity
Control

Detail parts
storage for
Module and $\frac{1}{2}$
octant structural
parts

Tilt Tables (2) for
Assembly and Handling
Gaps modules and $\frac{1}{2}$ -
octants

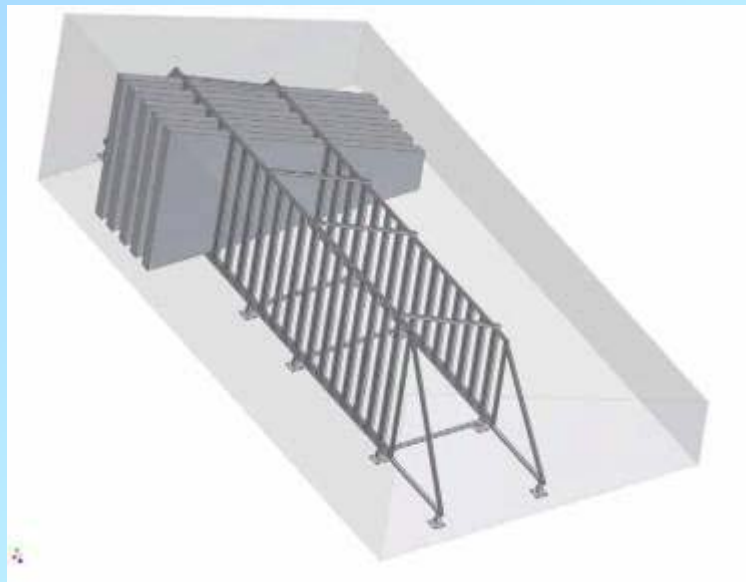


Dark Current Test Stand under construction



Also working on:

- a burn-in test stand for $\frac{1}{2}$ octants



- additional storage for gaps modules and structural detail parts
- transport table/cart

New ODH1 Rules for RHIC tunnel (Does not include IR but does include RPC 3 area)

ODH Web training TQODH1 (All should take this as soon as possible ~ 15 minutes)

POM and escape pak training: Jan. 8, 9, 14 & 28 at 1:15-2:00 PM, Jan 12, 15, 20, 21, 22, 26 & 29 at 11:15-12:00 Noon. All classes in building 911 Snyder Seminar Room

Medical physical (may be waived)

PHENIX personnel to be trained for ODH1: All Technical Support Staff

Rad worker 1 also required during run for those doing work in the tunnel. [Carter, John T., Frank, Sal, Paul, Steve, Don, (Mike Rau).]

RPC Personnel?

Others?

You will need the ODH-1 training to be escorted in the tunnel. You do not need Rad worker 1 to be escorted in the tunnel.

Shutdown '09: Planning Begins Now!

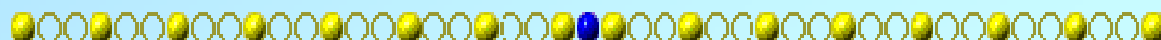
Major tasks:

- 2009 shutdown Begins July 1, 2009
- Install stations 1, 2 and 3 south MuTrigger FEE's
- MuTr decapacitations: station 3 south
- RPC Station 3 North
- PC1 East repair
- Prep for future upgrades

Where To Find PHENIX Engineering Info



Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:



http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm